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THE AUSTRALIAN NATURALIST

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The Australian Naturalists' Society

of New South Wales.

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The Australian Naturalists' Society

OF NEW SOUTH WALES

Council 1961-1962.

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The President, Hon. Editor, and Hon. Secretary

NOTICES

Meetings of the Naturalists' Society are held on the first Tuesday of each month, except January, in the Salvation Army Headquarters Building, 140 Elizabeth Street (Clark Street entrance) at 7.30 p.m. Members are reminded that exhibits and notes of field observations are welcome, and also that visitors may be brought to meetings and outings.

The Journal may be obtained from the Hon. Secretary. Price 3/-. Postage extra. It is issued free to members.
Annual Subscription. Adults 15/-. Juniors (under 18 years) 2/6. Country members 4/-.

EXTRACTS FROM THE SECRETARY'S REPORT

Membership of the Society now stands at 117, seven new adult, one country, and two junior members having been added during the year.

We record with regret the loss by death of six of our members, Miss Hill and Mrs. Ludovici, both members for many years, Miss M. Christie who was a member of Council and Hon. Lanternist, Mr. Ashley, Mrs. D. Marshall and Mr. Cotterill, and we send our sympathy to their relatives.

Our most important activities again include the publication of our Journal, the Australian Naturalist. The Society is active in its endeavours to help in the conservation of our natural heritage, and has added its protests to those of other Societies and succeeded in lessening much destruction and preventing some altogether.

It is interesting to note there has been a large increase in requests for copies of our Journal from overseas including one from South Africa (through Mr. Whitley) requesting the issue describing the Bronze Whaler Shark.

Our outings have been many and various, including those to Hurstville Grove; Springwood; Waterfall; Malabar; Centennial Park; The Gap Park, Watson's Bay; Stony Range, Dee Why, and Barrenjoey. The usual plantings took place at the A. E. Watson Memorial Park, Ball's Head, and Stott's Reserve. This year we have had several Girl Guides with us and with the assistance received from members in various aspects of Natural History, two have succeeded in gaining their Queen's Badges.

Our thanks again go to the Salvation Army for their continued permission to use the Young People's Hall for our meetings, to the Lecturers who have given such interesting talks and shown such beautiful slides, and to the members of the Council who have given up so much of their time to the Society.

LIST OF SPEAKERS

Dr. Barbara Briggs: Wild Flowers of Western Australia (with slides.)

Mrs. P. Messmer: Following my Camera round the World (with slides).

Miss I. McKinney: Trip to Central Australia (with slides)

Miss D. Nicholls: Down the River Murray on the paddle steamer "Wanera" (with slides).

Miss M. Christie: Trip to Japan (with slides)

Mrs. P. Messmer: Tour of Britain (contd.) with slides.

Mr. C. N. Smithers: Migration of Insects.

Mr. E. O. Edwards: The Association of Butterflies and Ants.

Mr. G. Tremlett: A Trip to Europe (with slides)

"WEEDS"

By Ron Gray

Weeds, those ubiquitous and so much despised plant colonisers of our lawns, gardens, footpaths, byways and highways, can become an interesting and fascinating study for leisure moments.

Many of them are exotics, having been seasoned travellers from most countries of the world and introduced in devious ways years ago, whilst numbers are indigenous to our own localities.

They are a very hardy vigorous army, ranging from large shrubs like castor oil plant and lantana, herbs such as thistle and dandelion, large creepers in lambs' tails and white moth plant, down to lowly ones in kidney weed and pennywort and many species of the grass family.

Thriving without care and attention, without fertilisers and added watering, unless in tended areas, in relatively short periods of time they outgrow their cultivated relations, hastily over-run lawn grasses and make waste of any vacant sites. Multiplying with great rapidity, their various methods of seed distribution are seemingly infallible. Observations will show that burning off, spraying, digging out and constant mowing do not eradicate, as even with these harsh methods they are not overcome and very often re-appear bountifully next season. How often have we stood, sometimes for an hour without pause, and weeded a lawn for jo-joes (bindii) till not one could be seen, and then next year back they are as thick as before.

Pests, fungi and disease attack them but again many are invulnerable and in many cases prove a source of transmitting disease to garden subjects.

Maybe one of the little thoughts mentioned above will arouse your interest in the enormous plant world of weeds and next time you journey to your daily toil or walk along your own footpath you will observe what grows in that crack in the concrete or is one inch taller in the lawn than the surrounding grass. Then perhaps fascination will commence to conquer you and you will want to know more about these plants, even if only to seek out new ways and means of overcoming them.

Below is a list of weeds observed growing in very restricted areas in two Sydney Suburbs, Coogee and Croydon Park. Certain plants e.g. *Trifolium repens* and *Lolium perenne* are actually fodder plants in country districts and hence are not regarded as weeds there.

The following list includes shrubs, creepers, herbs and grasses, and in conclusion a word of thanks and appreciation must go to the Staff of The National Herbarium for their help in identifying specimens submitted.

BOTANICAL NAME

Acetosa sagittate(*Rumex sagittatus*)*Acetosella angiocarpa**Agrostis avenacea**Alteranthera denticulata**Apium tenuifolium**Amaranthus viridis**Aster subulatus**Anagallis arvensis**Anredera cordifolia*(*Boussingaultia baselloides*)

"Turkey Rhubarb."

"Sorrel"

"Blown Grass"

"Lesser Joyweed"

"Slender Celery"

"Green Amaranth"

"Bushy Starwort"

"Scarlet Pimpernel" also

"Blue flowered"

"Lambs' Tails"

<i>Araujia hortorum</i>	"White Moth Plant"
<i>Avena fatua</i>	"Wild Oat or Black Oat Grass"
<i>Bidens pilosa</i>	"Cobblers Pegs"
<i>Bothriochloa ambigua</i>	"Red Grass"
<i>Bromus madritensis</i>	"Madrid Brome Grass"
<i>Bromus molliformis</i>	"Soft Brome Grass"
<i>Bromus unioloides</i>	"Prairie Grass"
<i>Briza major</i>	
<i>Briza minor</i>	"Shivery Grass"
<i>Capsella bursa-pastoris</i>	"Shepherd's Purse"
<i>Cardimine hirsuta</i>	"Bittercress"
<i>Carex inversa</i>	A small native sedge
<i>Cerastium viscosum</i>	"Mouse Eared Chickweed"
<i>Cestrum aurantiacum</i>	"Orange-flowered Cestrum"
<i>Chenopodium album</i>	"Fat Hen"
<i>Chenopodium trigonum</i>	
<i>Coronopus didymus</i>	"Lesser Swinecress"
<i>Cotula australis</i>	"Common Cotula"
<i>Cryptostemma calendula</i>	"Capeweed"
<i>Cyperus rotundus</i>	"Nut Grass"
<i>Dichelachne crinata</i>	"Long Hair Plume Grass"
<i>Dichondra repens</i>	"Kidney Weed"
<i>Digitaria ascendens</i>	"Summer Grass"
<i>Echinochloa crusgalli</i>	"Barnyard Grass"
<i>Echinopogon</i>	"Rough Beard Grass"
<i>Elusine indica</i>	"Crowsfoot Grass"
<i>Erigeron linifolius</i>	"Flax Leaf Fleabane"
<i>Eupatorium adenophorum</i>	"Crofton Weed"
<i>Euphorbia marginata</i>	"Snow on the Mountains"
<i>Euphorbia peplus</i>	"Petty Spurge"
<i>Euphorbia drummondii</i>	"Caustic Weed"
<i>Facelis retusa</i>	No common name
<i>Fumaria</i>	
<i>Galinosoga</i>	"Potato Weed"
<i>Gnaphalium spicatum</i>	"Cudweed"
<i>Gomphrena celosioides</i>	"Gomphrena Weed"
<i>Hordeum leporinum</i>	"Barley Grass"
<i>Hydrocotyle peduncularis</i>	"Pennywort"
<i>Hypochoeris radicata</i>	"Cat's Ear"
<i>Imperata cylindrica</i>	"Blady Grass"
<i>Ipomoea congesta</i>	"Blue Morning Glory"
<i>Juncus homalocalis</i>	A native rush
<i>Kohlruschia prolifera</i>	
<i>Kyllinga brevifolia</i>	"Mullumbimby Couch"
<i>Lantana spp.</i>	
<i>Lagurus ovatus</i>	"Hare's Tail Grass"
<i>Lepidium bonariense</i>	
<i>Lepidium hyssopifolium</i>	"Peppercress"
<i>Lolium perenne</i>	"Perennial Rye Grass"
<i>Lolium strictum</i>	"Rigid Rye Grass"
<i>Malva parviflora</i>	"Small flowered Mallow"
<i>Medicago hispida</i>	"Toothed Medic"
<i>Medicago lupulina</i>	"Black Medic"
<i>Melilotus indica</i>	"Hexham Scent"
<i>Modiola caroliniana</i>	"Red flowered Mallow"
<i>Nothoscordum inodorum</i>	"Onion Weed"
<i>Onopordum acanthium</i>	"Scotch Thistle"
<i>Oxalis corniculata</i>	"Yellow Wood Sorrel"
<i>Oxalis martiana</i>	"Large Leaved Wood Sorrel"
<i>Oxalis pes-caprae</i>	"Sour Sob"

<i>Paronychia brassiliana</i>	"Chilean Whitlow"
<i>Parietaria diffusa</i>	"Pellitory-of-the-Wall"
<i>Paspalum dilatatum</i>	
<i>Phytolacca octandra</i>	"Inkweed"
<i>Plantago lanceolata</i>	"Lamb's Tongue"
<i>Plantago major</i>	
<i>Poa annua</i>	"Winter Grass"
<i>Poa pratensis</i>	"Kentucky Blue Grass"
<i>Polycarpon tetraphyllum</i>	"Four Leaved Allseed"
<i>Polygonum aviculare</i>	"Wireweed"
<i>Polypogon monspeliensis</i>	"Annual Beard Grass"
<i>Portulaca oleracea</i>	"Pigweed"
<i>Ranunculus sceleratus</i>	"Celery Leaf Buttercup"
<i>Richardia stellaris</i>	
<i>Ricinus communis</i>	"Castor Oil Plant"
<i>Romulea rosea</i>	"Onion Grass"
<i>Rubus vulgaris</i>	"Blackberry"
<i>Rumex brownii</i>	"Swamp Dock"
<i>Rumex crispus</i>	"Curled Dock"
<i>Scirpus cernuus</i>	A native Sedge
<i>Scirpus nodosa</i>	
<i>Senecio vulgaris</i>	"Common Groundsel"
<i>Separia geniculata</i> var. <i>pauciseta</i>	"Slender Pigeon Grass"
<i>Sherardia arvensis</i>	"Field Madder"
<i>Sida rhombifolia</i>	"Paddy Lucerne"
<i>Silene anglica</i>	"French Catchfly"
<i>Silene maritima</i>	"Bladder Campion"
<i>Sisymbrium officinale</i>	"Hedge Mustard"
<i>Sisymbrium orientale</i>	"Indian Hedge Mustard"
<i>Solanum mauritianum</i>	"Tobacco Tree"
<i>Solanum nigrum</i>	"Black Berried Nightshade"
<i>Solanum pseudocapsicum</i>	"Madera Winter Cherry"
<i>Solanum seafortiana</i>	
<i>Soliva pterosperma</i>	"Jo-Jo" or "Bindii"
<i>Sonchus oleraceus</i>	"Common Sowthistle"
<i>Sporobolus capensis</i>	"Parramatta Grass"
<i>Stachys arvensis</i>	"Stagger Weed"
<i>Stellaria media</i>	"Chickweed"
<i>Taraxacum officinale</i>	"Dandelion"
<i>Trifolium repens</i>	"White Clover"
<i>Trifolium arvense</i>	"Hare's Foot Clover"
<i>Trifolium dubium</i>	"Small Clover"
<i>Trifolium glomeratum</i>	"Ball Clover"
<i>Urtica urens</i>	"Stinging Nettle"
<i>Veronica persica</i>	A species of "Speedwell"
<i>Veronica plebeia</i>	"Speedwell"
<i>Vulpia bromoides</i>	A Rat's tail Fescue
<i>Vulpia myuros</i>	A Rat's tail Fescue
<i>Vetch</i>	
<i>Xanthium chinense</i>	"Noogoora Burr"
<i>Xanthium spinosum</i>	"Bathurst Burr"

FROM PEARLS TO AERONAUTS

By C. V. Nathan

January, 1962, was remarkable at Vacluse, Sydney, for the high-density air traffic of *Papilio aegeus* aegeus, the Large Citrus butterfly. With a wing-span of five inches, the females of this species are the largest butterflies in N.S.W., South of Far North Coast, their beauty matching their size. The black and white males are less than four and a half inches in wing-spread.

On the 22nd January, 1962, I found a solitary pearl-like egg attached to the under-side of a lemon-leaf, so the leaf was placed in a glass jar. Next day it had darkened in colour on top, and on the 24th I was confronted with the weirdest little caterpillar, some 3 mm. long. It was black with greyish-white bands and had feeler-like processes on the prothorax. Dorsal spines created rather a Cup-moth larva effect.

There it stood motionless on the leaf, tapering from fore to aft, like a veritable lion. Its first meal had been the pearly egg that had formerly ensconced it, of which not a vestige remained.

As little *Papilio*, for that was its identity, grew, so its appetite increased, demanding every few days a fresh lemon leaf for the larder.

After several moults, its red osmaterium was very evident. This is a forked organ situated just behind the front of the head, which shoots out like a jack-in-the-box, every time the creature is alarmed or annoyed. The baby appears to bear this organ from birth.

On reaching an inch in length, my caterpillar unfortunately died. This necessitated me transferring my study to the lemon-grove, itself. There were larvae ranging in size from 4mm. to 2½ inches, and on 21.2.62 the happy discovery was made of two green, leg-of-mutton shaped chrysalides on a dwarf lemon-tree. At some angles they resembled the grotesque form of a human torso, their camouflage blending perfectly with the green shades of the lemon-trunk and leaves. There were white edgings on the sides of the chrysalids and one made a convulsive movement when a curious mite explored its body.

Numbers of rain squalls occurred in the ensuing days but the chrysalides remained intact, which was amazing because although cemented by the tails to the lemon branchlets, they had only the slimmest of safety-belts, finer than silken thread, slung round the upper torso.

Came the 13th of March, and at 12.50 p.m. there greeted me a maximum sized lady *Papilio*, drying her magnificent wings as she stood on her lately vacated chrysalis (1½ in. long!).

A downpour of rain at 2.20 p.m., made me fear for her safety, but visiting the tree at 3.15 p.m., I found the shrewd damsel with outspread wings coinciding exactly with the direction of two large overhanging leaves the perfect UMBRELLA! She still stood on the empty chrysalis.

The sun popped out of the clouds at 4.30 p.m., so back I went to my vigil. *Papilio* had leapt clear of the citrus tree by about two feet, and was violently fluttering her wings in a tall clump of native Creeping Beard Grass. By short seven inch leaps, aided by incessant wing-beating, she gradually worked further afield. She reached and climbed a taller grass stem than its neighbours, at 4.45 p.m. and took straight to the air with never a falter. Within seconds she had passed out of sight in the forest.

A NEW GOBY FROM SYDNEY

(Pisces: Gobiidae)

By Gilbert P. Whitley, F.R.Z.S.

(Contribution from the Australian Museum, Sydney).

The fish-fauna of Port Jackson is extraordinarily varied. Although collections have been made here over a period of more than 170 years, new records continually come to light. Recently an entirely new goby was found in numbers amongst seaweeds off Cremorne Point, in the heart of Sydney's harbour. It is named, figured and described below.

Family GOBIIDAE

CREMORNEA, gen. nov.

Orthotype, *C. francoisi*, sp. nov.

An Australian marine goby with facies as figured and with the following diagnostic characters:—

Head not compressed. Teeth in several rows. Tongue rounded. Minute genipores. No barbels, lobes or crest. Gill opening much deeper than pectoral base, extending well forward below. Form not oval. Head and foreparts naked; sides and posterior portions of body with ctenoid scales. Sc. 22 to 27. Vertebrae 24, excluding hypural. Six dorsal spines. No free pectoral rays. Ventral fins united and with frenum, fifth ray longest. Caudal shorter than head, rounded. Details are given in the description of the species.

Coloration as in *Prionolepis* (*Zonogobius*, auctt.), but the ventral fins are united, not separate as in that genus. Similarly as regards *Quisquilius* but that has scaly head and more finrays and scales. In McCulloch and Ogilby's key to Australian Gobiidae Rec. Austr. Mus. 12, 1919, p. 204), enters section t but differs from *Berouira lidwili*, there indicated, by its increased numbers of dorsal and anal rays, shorter caudal peduncle, larger size, and distinctive coloration.

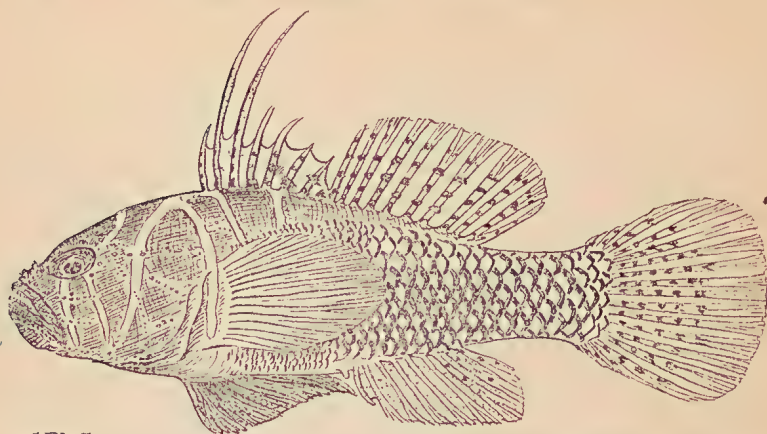
CREMORNEA FRANCOISI, gen. et sp. nov.

(Figure 1)

D. iv/10; A i, 8; P. 15; C. 6 plus 12 plus 4. Sc. 24. Tr. 9 between soft dorsal and anal.

Head (7.5 mm.), 3.2, depth (7) 3.4 in standard length (24). Eye, 2 mm.; interorbital, 1.2; maxillary, 4; width of head, nearly 6; longest (third) dorsal spine 8; longest (sixth) anal ray, 5; pectoral, 7; depth of caudal peduncle, 3.7; length of caudal fin, 7 mm.

Head rounded, not compressed. No transverse groove behind eyes. No barbels or crest. Tip of snout on level of lower part of eye. Lips exposed; maxillary sheathed, reaching below front of eye. Tongue convexly rounded, its tip free not adnate. No V-shaped notch on tip of lower jaw, which protrudes. Cleft of mouth oblique. A single series of slightly enlarged simple, curved teeth in upper jaw exterior to a narrow band of villiform teeth. Lower jaw teeth similar plus three curved canines on each side internally. Apparently some minute teeth or vomer and palatines. Preoperculum unarmed. Head naked, with several short rows of minute genipores round and behind eyes, down opercles and around chin. Mucous pores over eye and along postorbital groove. Nostrils tubular, front near upper lip, posterior ones near eye. Eye, oval, longer than snout and greater than interorbital which has a median depression. Gill-openings wide, from near upper origin of pectoral to lower part of head behind eye, separated by narrow isthmus. Eleven slender, curved gill-rakers on lower part of first gill-arch.



G.P.W.

— 1/2 IN. —

Body compressed. Scales increasing in size posteriorly, ctenoid, with about 1 to 20 basal radii and 15 to 17 ctenii. Back naked anteriorly; no predorsal scales; breast naked before ventral fins. Anal base and area around vent naked, pectoral base naked. Scales extend between pectoral fins nearly up to their axils where there are some short, vertical rows of pores.

Fins all rounded. Dorsal fins united basally by membrane, one or two spines produced in some specimens. Anal similar to soft dorsal but not so tall. Pectoral without free rays, eighth ray longest, but shorter than the head. Ventrals united by basal frenum, fifth rays longest, reaching base of first anal ray. Caudal rounded, shorter than head.

General colour after preservation in formalin, then alcohol, various shades of brown. Head and back crossed by several lighter descending bars: a wish-bone shaped light barring from predorsal area down sides of opercles and pectoral base, several bars radiating from eye (as figured) and others descending from near dorsal base. Scales light brown with dark brown borders, emphasising their pattern. Fin-membranes transparent, yellowish or brown. In all the unpaired fins the spines and rays have a series of dark brown spots along each. Pectorals plain, yellowish. Ventrals mostly blackish, lighter towards margin.

Described and figured from the holotype, a specimen 24 mm. in standard length or little more than 1½ inches overall (Aust. Mus. regd. no. IB. 5692) and eleven paratypes (IB. 5693-94) which show no important variation, apart from Sc. 22 to 25, rarely 26 or 27 plus one on the tail-fin. An adult female (IB. 5693) was stained with alizarin by Mr. Roy Mackay and had 24 vertebrae excluding the hypural fan, above and below which are small splint bones similar to those in Gosline's figure 7a (1955, Pacific Science 9: 165)).

Loc. Amongst seaweeds off Cremorne Point, Port Jackson, New South Wales; 25:iii:1962. Collected and presented by Dr. Donald Francois, State Fisheries Branch, Chief Secretary's Dept., Sydney.

Related to *Gobiopterus fuscus* Jordan and Evermann (1903, Bull. U.S. Fish. Comm. 22:205, and 23, 1905: 482, pl. 59) from the Hawaiian Islands.

ORCHIDS OF THE BLUE MOUNTAINS, N.S.W.

By Isobel Bowden

(29 Figures depicting typical flowers of the Orchid Genera
of the Blue Mountains.)

For the purpose of these notes the Northern boundary of the Blue Mountains area is the Northern watershed of the Grose River, and it includes the Mount Wilson-Mount Irvine spur. The Southern boundary is the Cox's River.

The Tableland itself rises from sea level at the Nepean River, 3 miles due west of Sydney, to 4,000 feet at Mount Boyce. Thus considerable variations in habitat and flowering periods are to be found.

Just over sixty years ago, Mr. A. G. Hamilton published "A Flora of Mount Wilson" in which 58 species of orchid were recorded. In "The Australian Orchid Review," June 1947, the Rev. H. M. R. Rupp published a list of orchids for the whole area of the Blue Mountains adding 41 species to Mr. Hamilton's list; 99 species in all. This list comprised only records carefully checked by Mr. Rupp and Mrs. P. R. Messmer and was not regarded as a full list. Since then further searching has resulted in the addition of another 46 species, bringing the number of species to 145.

Some interesting new records include three new species of *Prasophyllum* collected by the writer and described by the Rev. H. M. R. Rupp. One of these, *P. anomalum* appeared to be closely allied to Fitzgerald's *Corunistylis apostacioides*, but the latter is shown with a group of small tubers at the base, whereas the new species had but two as is usual in the *Prasophyllum* group. Specimens have been recorded from Wentworth Falls to Glenbrook along the central watershed. *P. bowdenae* appears to have a more limited range being recorded from several ridges at Woodford. *P. mucronatum* has been recorded also from Wahroonga a Sydney suburb, by Captain McComish.

Mr. J. Blackmore has discovered the Victorian greenhood *Pterostylis fischii* (Nich.) well established along the Upper Grose River, and also *P. pedoglossa* at Mount Victoria.

The range of *Adenochilus nortonii* is known to extend 1,000 feet lower to areas near Linden. *Caladenia iridescens* is plentiful on the higher mountains and one record of *Sarcochilus olivaceus* places it on the list.

Other interesting records include *Thelymitra truncata*, (Rogers) which has been treated as a varietal form of *T. ixioides* by W. H. Nicholls; it is difficult to understand the reason, as several others which would appear to be quite as close to *T. ixioides* are treated as valid species.

T. ixioides var. *merranæ* was collected by Mr. A. W. Dockrill at Wentworth Falls, and *T. luteocilium* was collected at Woodford by Mr. Rupp and party.

Mr. Dockrill found specimens of *Diuris citrina* at Katoomba and the writer found *Diurus equalis* at Mount Victoria.

The known orchid records are distributed amongst 28 Genera, and include 17 species of epiphytes which are scattered in sheltered valleys and brush pockets.

Where the flowering time or locality may be of interest the writer has included records from personal collections: in this case date and place are given but no name, for the records have often been duplicated by A. W. Dockrill, J. Blackmore and others. In some cases early records are quoted as a matter of interest,

but it would not be possible to give a full list of collections. Where a species has been included in Mr. Rupp's list the letter R) has been placed after the name of the orchid. If the species appears on both Mr. Rupp's and Mr. Hamilton's lists the letters (H. and R.) have been inserted.

The additional records are largely the result of collecting by Mr. A. W. Dockrill and Mr. J. Blackmore, both of whom have given the writer lists and notes at various times—and the writer's own collecting.

It is felt that the 46 new species within the area are worth recording, even though further search will no doubt add to the present number of species.

In these notes the letters N or S and E placed after the Generic name show whether it is of Northern or Southern origin and whether it is Endemic in Australia.

THELYMITRA, Forst. (S.)

T. circumsepta, Fitzg. (H. & R.) Mt. Tomah, Fitzgerald; Mt. Irvine, Mt. Wilson and Bell, Nubling; Mt. Irvine, G. Scriviner 1941. Later records by Miss M. Pearce and Mr. Blackmore establish this species on the main watershed.

T. izioides, Sw. (R.) Plentiful on the main watershed. Glenbrook 9; Wentworth Falls 10; Bell 11; Mt. Victoria 12.

T. izioides var. *merranae*. Wentworth Falls, Dockrill 10. 1954.

T. media, R. Br. (H. and R.) Narrow Neck, Blackmore 31.10.53; Woodford 10, 1950; King's Tableland 10.11. 1955; Mt. Wilson 9.1950.

T. truncata, Rogers (*T. izioides*, var. *truncata*, Nich.) Woodford 10.1948; Lawson 10.1949; Wentworth Falls, Dockrill 31.10.53.

T. longifolia, Forst. Woodford, Messmer 14.10.50; Mt. Victoria, Blackmore 14.11.53.

T. chasmogama, Rogers. (R) Woodford, Messmer and Rupp, 10.1939; Faulconbridge and Woodford 9.1950; Narrow Neck, Blackmore 31.10.53.

T. irregularis, Nich. Woodford, Bowden 1952; Wentworth Falls, Dockrill 10, 1953.

T. luteociliium, Fitzg. Woodford 10.1950; and Rupp and party 10, 1952.

T. aristata, Lindl. Mt. Victoria 14.11.53.

T. nuda, R. Br. Woodford, Bowden 10. 1949; Wentworth Falls 10.11.55; Katoomba, Dockrill; Wynns Rocks at Mt. Wilson 15.10.50.

T. pauciflora, R. Br. (H. and R.) Widely distributed, Glenbrook 10, Woodford 10; Katoomba to Mt. Wilson 11.

T. carnea, R. Br. (H and R) Widely distributed.

T. rubra, Fitzg. Wentworth Falls and Katoomba, Dockrill and Bowden 10.53; Narrow Neck, Blackmore 31.10.53.

T. venosa, R. Br. (H and R) Woodford to Mt. Victoria. Rare.

T. venosa var. *magnifica*, Rupp (Fig. 1) In damp situations 11 and 12.

DIURIS, Sm. (S.)

D. tricolor, Fitzg. (R.) Glenbrook, Rupp.

D. aequalis, F. Muell, Mt. Victoria. Bowden 14.11.53.

D. maculata, Sm. (R.) Widely distributed. Glenbrook 8; Faulconbridge 9; Katoomba 10.

D. brevissima, Fitzg. and Nich. (R) Woodford, Fitzgerald 10; Faulconbridge, Blackheath 10. and Katoomba-Dockrill.

D. platichila, Fitzgerald. (R) Woodford, Fitzgerald; Woodford Faulconbridge, Blackheath 10. (Identified Nicholls).

D. palachila, Rogers. Blackheath, Bowden (identified Nicholls); Katoomba, Dockrill 10.54.

D. citrina, Nich. Katoomba. Dockrill 10. 1954.

D. sulphurea, R.Br. (H. & R.) Wentworth Falls, Maiden 10.

1893. Glenbrook 10; Mt. Victoria 11-12. Widely distributed.

D. flavopurpurea, Messm. (R.) Mt. Victoria, Messmer 10.43; Blackheath, Woodford; Katoomba, Dockrill 10.54; Katoomba 10.53 and Blackheath 10.55 Blackmore.

D. lineata, Messm. (R.) Mt. Victoria, Messmer 10.43; Mt. Victoria, Messmer, Blackmore and Bowden 14.10.1950; Leura, Bowden 10.50.

D. victoriensis, Messm. (R.) Mt. Victoria, Messmer 10.43 and 10.50; Blackheath, Blackmore 10.55.

D. pedunculata, R. Br. (R) Blue Mts., Blakely 11.1899; Wentworth Falls 10.49; Katoomba, Blackmore and Bowden; Katoomba Dockrill.

D. pedunculata var. *gigantea*, Nich. Blue Mts. Betché 10.1881; Wentworth Falls 10. 1950.

D. polymorpha, Messm. (R.) (Fig. 2). Mt. Victoria, P. Messmer 10, 1942; Mt. Victoria, P. Messmer, 10. 1943; Wentworth Falls, Bowden 10. 49 and 10. 56; Katoomba, Dockrill; Katoomba, Blackmore; Wentworth Falls, Messmer, Bowden and Blackmore, 10. 1950.

D. aurea, Sm. Blaxland, 9.1950; Glenbrook-Erskine Creek, 10. 1960. Katoomba, Miss M. Pearce.

ORTHOCERAS, R. Br. (S)

O. strictum, R. Br. (H. & R.) (Fig. 3). Widely distributed. Mt. Victoria, Maiden 12. 1896.

MICROTIS, R. Br. (N.).

M. unifolia (Forst) Reichb. f. (H. & R.). Widely distributed. Woodford 10. 1948; Mt. Wilson 10.11.55.

M. parviflora, R. Br. (H. & R.) Blue Mts., Betché 10, 1881, Leura, Rupp 12. 1918; Woodford 10, 1948. Widely distributed

M. oblonga, Rogers (R.) (Fig. 4) Mt. Irvine, Scriviner and Rupp 11. 1941; Woodford, 10. 1949.

M. bipulvinaris, Nich; Faulconbridge, Bowden 9.1950.

PRASOPHYLLUM, R. Br. (S)

P. australe, R. Br. (R.) Leura, A. A. Hamilton 12. 1902; Mt. Irvine, Scriviner 11. 1941.

P. flavum, R. Br. (H. and R.) (Fig. 5). Blue Mts. Betché 1. 1887; Mt. Tomah, Gregson 1, 1898; Wentworth Falls, Fletcher 12. 1896; A. A. Hamilton 1. 1915; Katoomba, A. A. Hamilton 12. 1901; Leura, Sulman. 1909; Mt. Irvine, Scriviner 12.1941. Widely distributed.

P. elatum, R. Br. Widely distributed. Woodford 9.46 and 9.47; Narrow Neck, Blackmore 10. 1953.

P. gracile, Rogers (R) Bell, Nubling 11.32; Katoomba 31. 10.53; Katoomba, Dockrill 10.54.

P. brevilabre, Hook f. (R.) Blue Mountains, Betché 10. 1881; Mt. Wilson. Gregson 10.1902; Glenbrook, Faulconbridge, Rupp and Loder 10. 52; Galong Creek, Blackmore 2.8.53; Narrow Neck, Blackmore 10.53.

P. odoratum, Rogers, Blackheath, Blue Gum Forest, Blackmore 10. 1955.

P. patens, R. Br. (R.) Wentworth Falls, Deane 11. 1888.

P. fuscum, R.Br. (R) Leura, Maiden and Gamage 11. 1904; Blackheath, Campbell.

P. striatum, R. Br. (H. and R.) Blue Mts., Fletcher 1890; Maiden 4. 05. A. A. Hamilton 4.14; Mt. Irvine, J. Scriviner 6.26; Woodford, Bowden, 5.45 and 3.48; Narrow Neck 4.59; Murphy's Trail, Bowden 3.60.

A new Prasophyllum described by Dockrill, collected at Mt. Banks in 1960 by Bowden and Blackmore, identified the following season by Blackmore.

SECTION MICRANTHE, (Rupp).

- P. longisepalum*, Fitz. (H. and R.) Mt. Wilson, Fitzgerald.
P. nichollsianum, Rupp. Woodford, Bowden.
P. aureoviride, Rupp. Woodford 3.48; Woodford, Dockrill 3.49; Springwood, Bowden 3.49; Bowen Creek.
P. aureoviride var. *elmae*, Rupp. Woodford 5.45; Warrimoo 3.50.
P. ansatum, Fitzg. (H. and R.) Mt. Wilson, Gregson 1.1904; Bell, Nubling 4.1928; Woodford and Mt. Victoria.
P. nigricans, R. Br. (H. & R.) Hazelbrook 3.47; Woodford 2.48.
P. transversum, Fitz. Mt. Wilson, Fitzgerald.
variable. Glenbrook to Mt. Victoria, March and April.
P. rufum, R. Br. (H. & R.) very widely distributed and very variable. Glenbrook to Mt. Victoria, March and April.
P. densum, Fitz. (H. & R.) Bell, Mt. Wilson Road, Nubling 3.29; Mt. Irvine, Scriviner 2.42; Woodford 1.47; Mt. Victoria 1. Hazelbrook 2
P. viride, Fitzg. (R.) The Valley, Fletcher 4. 1888; Springwood 3; Woodford, Dockrill 3.
P. beaugleholei, Nich. (H. & R.) Mt. Wilson, Nubling 3.1929; Mt. Irvine, Scriviner 2.42 and 3.43; Wentworth Falls, Bowden 3.58, Blackmore & Bowden 3.59.
P. sagittiferum, Rupp. (R.) Bell, Mt. Wilson Road, Nubling 3. 1929 & 3. 1930.
P. archeri, Hook. f. Blackheath, Althofer; Mt. Victoria 2.49; Katoomba, Bowden & Blackmore 3.59; Woodford 2.48; Springwood 3. 49 & 2.50. Dark prune color at Mt. Victoria, pale yellowish-green at Springwood.
P. reflexum, Fitz. Woodford, Bowden, identified by Rupp, (doubtful).
P. eriochilum, Fitzg. Mt. Wilson, Fitzgerald.
P. wilsoniense, Rupp. (R.) Mt. Wilson, Nubling 12. 1927.
P. fimbriatum, R.Br. Blaxland, 18.3.49 & 3.50; Glenbrook 28.1.53.
P. morrisii, Nich. (H. & R.) (Fig. 5A). Bell, Nubling 4. 28; Mt. Irvine, Messmer 1.21, Scriviner 2.42; Woodford, Bowden 2. 45; Faulconbridge 2.50; Clarence 28.1.53; Murphy's Trail 3.60.
P. morrisii var *intermedia*, Rupp. Mt. Victoria - Mt. Irvine; to Woodford — similar distribution to *P. morrisii*.
P. woollsii, F. Muell. (R.) Mt. Irvine, Scriviner 11.41; Von Mueller's specimens were from "The Blue Mountains"; Mt. Victoria, Bowden & Blackmore 1.59.
P. mucronatum, Rupp. Woodford, Bowden, (now on Glenbrook fire trail); Faulconbridge, Bowden 1.9.49.
P. bowdenae, (Rupp). Woodford, 5.45; 4.47; and 4.56. This species is scattered over various grassland areas in the vicinity of Woodford, it has not been recorded elsewhere.
P. anomalum, (Rupp). Woodford, Bowden 4.47; Wentworth Falls, Blackmore & Bowden 2.58; Murphy's Trail 3.60; Faulconbridge, 2.49 and 3.58 (Fauna outing) also Glenbrook.
CALEANA, R. Br. (S).
C. major, R. Br. (H. & R.) (Fig. 6.) Blue Mts., Betche; Katoomba, R. C. Dixon 11. 1903; Woodford, Bowden 1.11.38; Bedford Creek, Woodford, Mr. and Mrs. Jeavons 9.8.58; Glenbrook, 10.56.
C. minor, R.Br. (H. & R.) Mt. Victoria, Fletcher 12.1892; Blackheath, Maiden 1.1903; Mt. Irvine, Scriviner & Rupp 11.41; Woodford 11.46; Clarence 1.53.
C. nublingii, Nich. Bell, Nubling 12.30; Mt. Victoria, Dockrill 1.41.

SPICULEA, Lindl. (S.E.).

S. huntiana, (F. Muell.) Schltr. (R.) Fig. 7). Blue Mts., Stephenson 1.1893 & 4.1893; Bell, Nubling 12.30; Mt. Victoria, Bowden 12. 50 & 2. 51; Mt. Victoria, Blackmore 12.60 & Bowden 1.62.

CHILOGLOTTIS, R.Br. (S)

C. reflexa, (Labill.) Druce (Fig. 8). Mt. Victoria, Maiden 4. 1906 Mt. Victoria, Bowden 3.53; Clarence 18.153; Mt. York 5.47; Lawson 4.49. Woodford 1.46. Widely distributed.

C. formicifera, Fitz. (H. & R.) Glenbrook, Scammell 9.26; Woodford, Bowden 9.46 and 29.8.50.

C. trilabra, Fitzg. Mt. York, Fitzgerald.

ACIANTHUS, R.Br. (S.)

A. caudatus, R.Br. (Fig. 9). Woodford, 8.46; Wentworth Falls, 10.53; Glenbrook, Bowden 9.52. Widely distributed.

A. fornicatus, R.Br. (H. & R.) Lawson, Bowden 5.51; Faulbridge 5.50. Widely distributed.

A. exsertus. (H. & R.) Woodford, Bowden 3.46 & 2.48. Widely distributed.

A. reniformis (R.Br.) Schltr. (R.). Burrogorang, Cambage. Rupp cites Kurrajong and Glenbrook. Kedumba Valley, Bowden 8.59; Burrogorang, Dockrill; Katoomba 8.61.

CALOCHILUS, R.Br. (S)

C. campestris, R.Br. (H. & R.) Wentworth Falls, Fletcher 11. 1889; Woodford 11.1946. Widely distributed.

C. robertsonii, Benth. Linden 10.54, also Bell's Road 11.55; Woodford 10.52. Widely distributed.

C. gracillimus, Rupp. (Fig. 10). Mt. Irvine, Scriviner 1.43; Mt. Irvine, Messmer 1.34; Wentworth Falls 3.50; Katoomba 1.50; Clarence 1.53.

C. paludosus, R.Br. (H. & R.) Wentworth Falls, Maiden 16.1898; Lawson, R. Dixon 11.1903; Blackheath 10.47; Bell's Road 11.55; Old Bathurst Road, Blaxland 10.56. Widely distributed.

ERIOCHILUS, R.Br. (S.E.)

E. cucullatus (Labill.) Reichb.f. (H. & R.) (Fig. 11). Widely distributed.

RIMACOLA, Rupp (S.E.)

R. elliptica, (R.Br.) Rupp (H. & R.) (Fig. 12) Wentworth Falls, Fletcher 2.1890; Woodford, Maiden 1.1899; Leura, A.A. Hamilton 12.02; Blue Mts., A. G. Hamilton 5.24; Mt. Wilson, Messmer 12.30; Mt. Irvine, Scriviner 12.41; Woodford, Linden, Hazelbrook, Lawson, Blackheath, Mt. Victoria in rock crevices.

LYPERANTHUS, R.Br. (S)

L. suaveolens, R.Br. (Fig. 13). Glenbrook, Bowden 9.48; Blaxland 9.49; Grose Valley, Blackheath, Blackmore 10.56.

BURNETTIA, Lindl (S.E.))

B. cuneata, Lindl. (R) (Fig. 14). Woodford, Fitzgerald unpublished plate in Mitchell Library is the only record. Flowers late spring.

CALADENIA, R.Br. (S).

C. patersonii, R.Br. Blue Mountains, Betcher.

C. dilatata, R.Br. (R.) (Fig. 15). Woodford, Bowden 10.47; Grose River Blackheath, Blackmore 10.55.

C. clavigera, Cunn, ex Wiugh (R.) Vale of Clwydd, Cunningham; Mt. Banks, Scriviner 1952.

C. carnea, R.Br. (H. & R.) Very widely distributed. Kedumba Pass, Bowden 10.53; Hazelbrook 10.54; Hawkesbury Lookout, Rupp 10.52; Bell 11.55.

C. alba, R. Br. (R) Glenbrook, Scammell 9.26; Woodford 9.47; Grose Valley Blackmore 10.55.

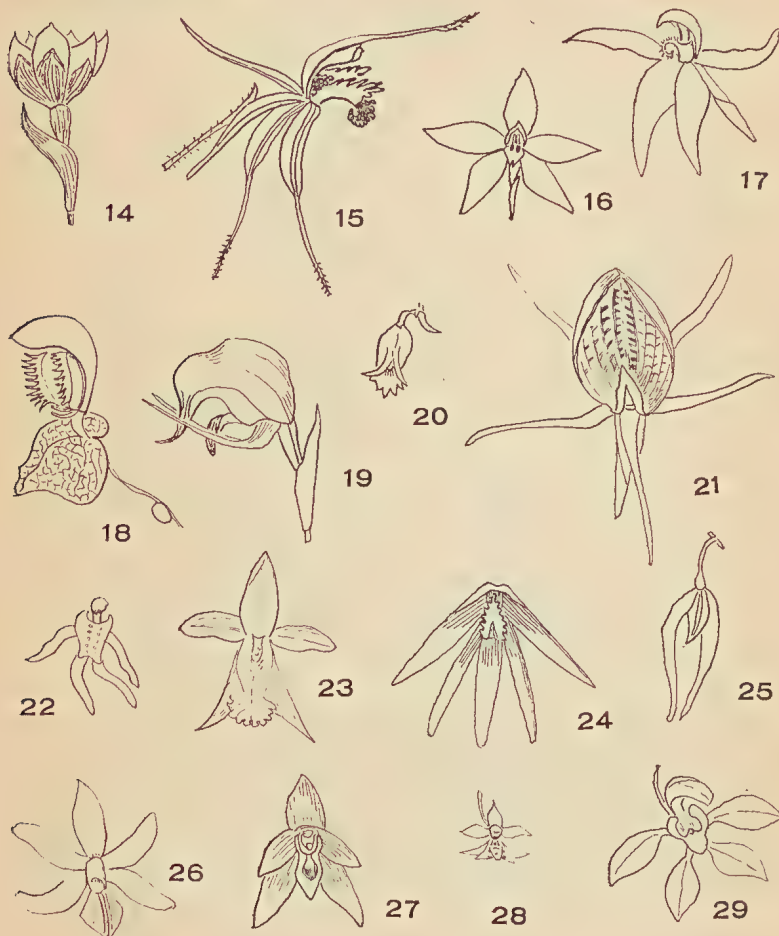
C. alba var. *picta*. Woodford, Rennie 5.47; Springwood 5.54; Wentworth Falls 6.56; Blue Gum Forest 3.62; Hazelbrook 3.62.



Figures 1-13. 1. *Thelymitra venosa* var. *magnifica*; 2. *Diuris polymorpha*; 3. *Orthoceras stricta*; 4. *Microtis oblonga* (after Nicholls); 5. *Prasophyllum flavum*; 5A section *Micranthe. Prasophyllum morrisii*; (much enlarged); 6. *Caleana major*; 7. *Spiculea huntiana* (much enlarged); 8. *Chiloglottis reflexa*; 9. *Acianthus caudatus*; 10. *Calochilus gracillimus*; 11. *Eriochilus cucullatus*; 10. *Calochilus gracillimus*; 11. *Eriochilus cucullatus*; 12. *Rimacola elliptica*; 13. *Lyperanthus suaveolens*.

C. dimorpha, Fitzg. (H. & R.) King's Tableland, Sulman 10.13; Newnes, A. A. Hamilton 11.14; Medlow, Nubling 11.28; Clarence, Blakely 11.39; Katoomba, Dockrill & Bowden 52; Mt. Victoria, Blackmore and Bowden 11.54, also Glenbrook and Woodford; Faulconbridge, Dockrill 9.50; Bell.

C. angustata, Lindl. Katoomba 10.53 Mt. Victoria 11.54 Blackmore and Bowden.



Figures 14-29. 14 *Burnettia cuneata* (from a photo by Nicholls); 15. *Caladenia dilatata*; 16. *Glossodia minor*; 17. *Adenochilus nortonii*; 18. *Corybas pruinosus*; 19. *Pterostylis nutans*; 20. *Gastrodia sesamoides*; 21. *Cryptostylis erecta*; 22. *Liparis reflexa*; 23. *Spiranthes lancea* (enlarged); 24. *Dendrobium teretifolium* var. *fairfaxii*; 25. *Bulbophyllum elisae*; 26. *Dipodium punctatum*; 27. *Cymbidium suave*; 28. *Sarcanthus tridentatus*; 29. *Sarcochilus falcatus*.

C. cucullata, Fitzg. Woodford, Moody and Rupp 10.36; Glenbrook and Katoomba.

C. testacea, R.Br. Glenbrook, Bowden; Hawkesbury Lookout, Rupp and party 10.52; Blaxland 9.52, 10.56.

C. praecox, Nich. (R) Woodford, Moody and Rupp a possible record; Mt. Victoria, Bowden.

C. iridescens, Rogers. Woodford, Bowden 10.45 also Blackheath 10.47; Wentworth Falls, Messmer, Blackmore and Bowden 10.50; Mt. Victoria and Hazelbrook; Wentworth Falls, Rupp and party 10.52.

C. caerulea, R. Br. Glenbrook; Bowden 9.48; Woodford 8.56; Wentworth Falls; King's Tableland 9.47.

ADENOCHILUS, Hook, f. (S).

A. nortonii, Fitzg. (R) (Fig. 17), Wentworth Falls, Fletcher and Deane 11.1888, A. A. Hamilton 11.1913; Mt. Victoria, Cheel 12.1900; Lawson, A. A. Hamilton 11.1901, Cribb 11.1914; Medlow, A. A. Hamilton 11.14; Katoomba, Scammell, 12.23 and 12.27; Wentworth Falls, Stephen 11.27; Woodford 11.47; Hazelbrook, 11.56; Linden 11.50.

GLOSSODIA, R. Br. (S).

C. pruinus, (Cunn) Reichb f. (H. & R.) (Fig. 18). Glenbrook, Bowden 9.48; Woodford 10.47; Blackheath 10.47; Narrow Neck Katoomba, Blackmore 10.53.

G. minor, R.Br. Fig. 16) Woodford, Bowden 9.47 and Glenbrook 9.48; Blackheath 10.48; King's Tableland.

CORYBAS, Salisb. (Corysanthes R. Br.) (N).

C. fimbriatus (R. Br.) Reichb.f. (R) Blue Mts., Scammell 6.1926; Rupp cites Glenbrook.

C. pruinus, (Cunn) Reichb f. (H. & R.) (Fig. 18). Glenbrook, Scammell 6.26; Woodford 5.48; Springwood, Naturalists' Soc. 6.57; Wentworth Falls and Kedumba 6.56; Govett's Leap Creek, Blackmore 4.55; Mt. Irvine 5.49; Katoomba 4.62.

C. aconitiflorus, Salisb. (H. & R.) Blue Mts., Deane 4.1888; Glenbrook, Scammell 6.28; Woodford 5.48; Springwood 5.48.

C. unguiculatus, (R. Br.) Reichb. f (R.) no locality given.

CRYPTOSTYLIS, R.Br. (N.)

C. erecta, R.Br. (H. & R.) (Fig. 21). Katoomba, Dixon 1.1904; Linden, English 12.1915; Mt. Irvine, Scriviner and Rupp 11.41; Woodford 1.48; Lockyers Road, Mt. Victoria 3.57.

C. subulata (Lab.) Reichb.f. (H. & R.) Woodford, Maiden 1.1899; Katoomba; Mt. Irvine, Scriviner 1.26, and Scriviner and Rupp 11.41; Woodford, Dr. Vermuelen and party 10.56; Clarence 1.53; Mt. Banks, Bowden and Blackmore 1.61. Widely distributed.

C. leptochila, F. Muell, ex. Benth (H. & R.) Wentworth Falls, A. A. Hamilton 12.1902; Bell, A. A. Hamilton 1.1912; Mt. Tomah, Nubling 1.30; Mt. Irvine, Scriviner and Rupp 11.21; Woodford 1.48; Wentworth Falls 1.59; Mt. Banks, Bowden and Blackmore 1.61.

PTEROSTYLIS, R.Br. (S)

P. ophioglossa, R. Br. Burragorang Valley, Dockrill.

P. curta, R.Br. (H. & R.) Burragorang, Cambage 8.1905; Woodford, Bowden 8.58; Kedumba Valley, Wentworth Falls 8.59; Blackheath and Blue Gum Forest, Blackmore 10.55.

P. nutans, R. Br. (H. & R.) (Fig. 19). Jenolan, Blakely 10.45; Woodford 9.45 and 8.48; Blackheath, Blackmore 10.55; very widely distributed.

P. nutans var. *hispidula*, Fitzg. Kurrajong Heights, Mt. Irvine, Scriviner and Rupp 3.43; Lawson 4.49; Mt. Irvine 5.49; Woodford 3.62; Wentworth Falls 4.62.

P. acuminata, R.Br. (R.) Kurrajong Heights, Betcher 3.1891; Springwood 5.48; Bowen Creek 5.49; Blackheath and Grose Valley, Blackmore 23.4.55; Woodford 2.48. Widely distributed.

P. pedoglossa, Fitzg. Mt. Victoria, J. Blackmore 4.59.

P. pedunculata, R.Br. (H. & R.) Woodford, Bowden 10.47; Mt. Wilson 11.55; Blackheath 10.47; Mt. Irvine 8.51; Perry's Look down at Blackheath, Blackmore 10.55; Glenbrook Fire Trail "Red Wire" National Park Trustees' outing 15.10.60.

P. falcata, Rogers (R.) Mt. Wilson, P. G. Valder 2.47.

P. grandiflora, R.Br. (H. & R.) Kurrajong, Selkirk 4.1901; The Valley, Deane 7.1884; Katoomba, A. A. Hamilton 4.1908; Linden, English 6.16; Woodford 5.45; Govett's Leap Creek, Blackmore 4.55.

P. truncata, Fitzg. Blue Gum Forest, Blackmore 4.55 a large colony found; Megalong Valley and Hartley Vale, Blackmore.

P. coccinea, Fitzg. (H. & R.) Mt. Wilson, P. G. Valder 2.47.

P. pulchella, Messm. Hazelbrook and Lawson, Miss M. Pearce, no date given.

P. reflexa, R. Br. (H. & R.) Clarence, Bowden 1.53; Blue Gum Forest, Blackmore 4.55.

The Rev. H. M. R. Rupp mentioned in a letter written shortly before he died that what appeared to be a new species had been collected at Mt. York. Mr. J. Blackmore notes that these specimens are identical with many collected by him in the upper Grose Valley in 1954 and 1959, they are closest to *P. reflexa*.

P. obtusa, R.Br. (H. & R.) Blue Mountains, Fletcher 4.1888; Glenbrook, Scammell 6.26; Woodford 2.48; Mt. Victoria, Lockyer's Road, Blue Gum Forest, Blackmore 4.56; Katoomba 4.62.

P. decurva, Rogers (R.) Mt. Wilson, Scriviner 2.47; Hazelbrook Miss M. Pearce 1961.

P. parviflora, R.Br. (H. & R.) Blue Mts., Fletcher 4.1888; Mt. Victoria, Maiden 4.1906; Woodford, Bowden 2.48; Mt. Victoria, Clarence 1.53. Very widely distributed.

P. daintreyana, F. Muell. Woodford, Bowden 4.53; Linden 3.48.

P. longifolia, R.Br. (H. & R.) Bell., Blakely 10.27; Govett's Leap Creek, Blackmore 4.55 Widely distributed.

P. mitchellii, R.Br. Glenbrook, Bowden 9.54; same locality, Blackmore and Bowden.

P. pusilla (Rogers). Glenbrook, growing with *P. mitchellii* Bowden 9.

P. pusilla var. *prominens* (Rupp) Old Bathurst Road, Blaxland 10.56.

P. mutica, R.Br. Woodford, 9.47; Wentworth Falls, Glenbrook.

P. cyenocephala, Woodford, Bowden 9.47; identified by Rupp. No further specimens have been located.

P. fishchii, Nich. Blue Gum Forest, Blackmore 4.55, 3.59 and succeeding seasons.

GASTRODIA, R. Br. (N)

G. sesamoides, R.Br. (H. & R.) (Fig. 20), Mt. Wilson, Gregson 12.1896; Leura, Cambage 11.1904; Woodford, Bowden 11.47; Katoomba, R. Johnston 1.59; Bells Road.

SPIRANTHES, Rich. (N.)

S. lancea (Thunb. ex Swartz) Backer, R. C. Bakh. & Steenis. (H. & R.) (Fig. 23). Blackheath, Maiden 1.1905, Bowden 2.48; Hazelbrook, 2; Wentworth Falls 2.

LIPARIS, Reichb. (N.)

L. reflexa (R. Br.) Lindl. (Fig. 22), Burragorang, Cambage 8.1905; The Valley, Fletcher 4.1888; Woodford, Bowden 4.45 and 3.48; Kedumba etc.

DENDROBIUM, Sw. (N)

D. speciosm, Sm. (H. & R.) Woodford, Bowden 9.47; also Glenbrook, Faulconbridge, Kedumba Pass, Mt. Irvine, etc.

D. aemulum, R. Br. Woodford, Bowden 9.47; in cultivation James Valley Road, Hazelbrook, Lawson, Leura, Mt. Irvine and Bowen Creek.

D. teretifolium, R.Br. (H. & R.) Woodford, Bowden. Bedford Creek 9.49; Lawson 10.56.

D. teretifolium var. *fairfaxii* (Fig. 24)

D. striolatum, Reichb f. (H. & R.) Mt. Victoria, Maiden 1897; Katoomba, Walford 10, 1922; Hazelbrook, Schleicher 10.31; Glenbrook, Rupp 10.1916; Woodford, Bowden 9.47; also Faulconbridge, Blackheath, Lockyers Road, Mt. York and others.

D. pugioniforme, Cunn (H. & R.) Rupp states "recorded by several collectors from the Blue Mountains" but while it grows in masses in the Mt. Wilson area and other rich basalt caps, the writer has found it only once on the main watershed near the Grose River at Faulconbridge.

D. linguiforme, Sw. (R.) Glenbrook, Woodford, Bowden 9.47, also Glenbrook.

D. cucumerinum, Macleay. Burragorang Valley, Scammell 1926; Messmer 1931 and Dockrill.

BULBOPHYLLUM, Thou. (N)

B. crassulifolium (A. Cunn. Lindl.) Rupp (R.) Springwood; Jacobs 11.35. All subsequent records from the same locality. Plentiful in the Springwood areas of Glenbrook Creek.

B. elisae (F. Muell) Benth. (Fig. 25). Lawson, Bowden 10.49, also Mt. Irvine; Woodford, Blackmore and Bowden also Hazelbrook.

B. exiguum, F. Muell (R.) Springwood, Betcher 10.1896; Mt. Irvine, Coll. ?; Woodford, Bowden 3.48. Widely distributed.

DIPODIUM, R. Br. (N)

D. punctatum, (Sm.) R. Br. (H. & R.) (Fig. 26), Mt. Victoria, Hunt 1, 1901; Springwood, Fletcher 2. 1887; Woodford, Bowden 12.47. Widely distributed.

CYMBIDIUM Sw. (N)

C. suave, R. Br. (R.) (Fig. 27). Rupp gives Springwood and Mt. Irvine. Woodford, Bowden 11.47, also Linden, Lawson, Warimoo. Widely distributed.

SARCANTHUS, Lindl (N.)

S. tridentatus (Lindl.) Rupp (R.) (Fig. 28). Mt. Irvine, Coll. Blue Mts., M. Bowden 10, 1918; Woodford, Bowden 9.47; Springwood, Lawson, etc.

SARCOCHILUS (R. Br. (N.)

S. falcatus, R. Br. (H. & R.) (Fig. 29). Plentiful on Northern Basalt and scattered through sheltered gullies. Apparently not present in the Glenbrook area. Woodford, Bowden 10.50, and Lawson, 19.49, Mt. Wilson, etc.

S. australis (Lindl) Reichb, f. Lawson, Bowden 10.49; and Woodford 10.50; Hazelbrook; Mt. Irvine.

S. olivaceous (Lindl) Woodford, Bowden 1948, flowered also 1949. One record only.

S. hillii (F. Muell). F. Muell. Woodford, Bowden 11.47, also Springwood and Glenbrook; Glenbrook Creek; Lapstone Gorge.

